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An Annotated Bibliography of Research Relevant to Attitudes toward Animals

1998-2013

The Humane Society Institute for Science and Policy

Compiled by Erich Yahner

(All Abstracts and Summaries from Authors or Publishers)

JOURNAL ARTICLES

- Beatson, R. M., & Halloran, M. J. (2007). Humans rule! The effects of creatureliness reminders, mortality salience and self-esteem on attitudes towards animals. *British Journal of Social Psychology*, 46(3), 619-632.**

This research paper presents findings from an experimental investigation of the attitudes that people hold towards animals when they are reminded of the fact that humans and animals are creatures alike. We tested the hypothesis that mortality salience (MS) would lead participants reminded of human creatureliness to evaluate animals more negatively, especially when they reported lower self-esteem. Student participants were randomly assigned to conditions in which MS was made salient and thoughts about human creatureliness were manipulated. Participants then reported their attitudes towards animals. Lending support to the hypothesis of this study, MS led participants with lower self-esteem to rate animals more negatively, when they were reminded of human—animal similarity. The implications of these results for understanding people's attitudes towards animals were discussed.

- Beatson, R., Loughnan, S., & Halloran, M. (2009). Attitudes toward animals: The effect of priming thoughts of human-animal similarities and mortality salience on the evaluation of companion animals. *Society & Animals*, 17(1), 72-89.**

Human attitudes toward nonhuman animals are complex and quite contradictory. They can range between extremely negative (animal cruelty) to positive (treating companion animals like human surrogates). Attitudes toward animals are especially negative when people think about human creatureliness and personal mortality. This paper investigates people's attitudes toward highly valued animals (companion animals). The research presented here tested whether companion-animal caregivers would respond to reminders of human creatureliness and mortality salience (MS) with more negative attitudes toward pets. Participants completed an online survey in which MS and human-creatureliness conditions were manipulated. Results showed that, under MS, even pet owners responded to reminders of human creatureliness with less positive attitudes toward the average pet. Thus, the effects observed in previous research extend to more popular animals, even among people with presumably positive attitudes toward animals.

- Bexell, S. M., Jarrett, O. S., Xu, P., & Feng Rui, X. (2009). Fostering humane attitudes toward animals: An educational camp experience in China. *Encounter*, 22(4), 25-27.**

The article focuses on the development of humane attitudes for animals in China. It notes that the program aims to help the development of positive and humane attitudes toward animals and nature for young people. It mentions that a critical intervention is essential to avoid massive levels of extinction and biodiversity loss. It states that the curriculum was based on human universals of compassion, morality, and solid scientific knowledge about animals and nature.

Castano, C. (2012). Fostering compassionate attitudes and the amelioration of aggression through a science class. *Journal of Research in Science Teaching*, 49(8), 961-986.

This study explores how science education could contribute to the amelioration of violent behaviors towards humans and non-human species, specifically in a Colombian school with a population of socio-economically disadvantaged students who demonstrate high levels of violence. Until now science education has not sought to change attitudes or to address the issue of school violence that is faced in many communities. Debates around the purposes of science education have paid little or no attention to the possible connection that exists between our attitudes to non-human animals and those towards humans. This study suggests that science education can play a role in changing attitudes and developing behaviors that aim at caring for others including other humans and non-human animals. The findings reported here are part of a wider study which included the design and continuing modification of an intervention for a fourth grade science class. The original study took place over 7 months with a group of 38 fourth-grade students from a socio-economically disadvantaged population who already presented high levels of aggression. The main focus of the intervention was on encouraging compassionate attitudes towards animals through gaining an understanding of their needs, emotions, capacities, current situations and their similarities with humans. Data were generated through diverse qualitative methods including participatory observations, semi-structured interviews, and written responses to open questions in three moments during the study. Findings from this study suggest that science education with a focus on promoting understanding and compassion towards animals could contribute to the amelioration of aggression in schools.

Fonseca, M., Franco, N. H., Brosseron, F., Tavares, F., Olsson, I. S., & Borlido-Santos, J. (2011). Children's attitudes towards animals: evidence from the RODENTIA project. *Journal of Biological Education*, 45(3), 121-128.

The instructional use of animals is a popular strategy to engage students with science, enhance their motivation, and promote values such as respect, tolerance, and empathy for all living beings. Although these beneficial outcomes are widely acknowledged, research has not provided reliable indicators of their efficiency. Therefore, it is essential to broaden the studies focused on the use of animals in education. In this regard, it becomes necessary to understand students' attitudes towards animals. This paper presents data on the attitudes of primary school children towards the humane treatment of animals. It follows the implementation of a longitudinal project based on the concept of 'classroom pet', aimed at fostering the development of scientific reasoning competencies and positive attitudes towards animals. To assess the project's efficacy, a methodology combining quantitative and qualitative assessment approaches was outlined. The study involved 43 students, aged 8–10, from two fourth-grade classes of the same school. Findings concerning how children's attitudes towards different animals and animal uses are modulated as the result of an animal-based educational intervention and naturally throughout their maturation are discussed. This study provides relevant information for the development and evaluation of humane educational programmes.

Heleski, C. R., & Zanella, A. J. (2006). Animal science student attitudes to farm animal welfare. *Anthrozoös: A Multidisciplinary Journal of the Interactions of People & Animals*, 19(1), 3-16.

Understanding attitudes toward farm animal welfare has the potential to foster an important link between the researching of welfare issues and the implementation of those findings. In this study, we examined the attitudes and knowledge base of university animal science students, who represent both potential consumers and future industry stakeholders. Eighty-seven students were surveyed to assess attitudes and knowledge base regarding farm animal welfare. In 2003, 58 introductory animal science (ZNTRO) and 29 applied animal behavior (AN BEH) students were surveyed at the beginning (week I, Early) and end (week 14, Late) of spring semester using a 58-item questionnaire. Evidence of students' knowledge base was lower than anticipated. AN BEH students demonstrated a higher knowledge base than did INTRO students. Some clear species perception differences were exposed. Students perceived that horses felt pain more similarly to humans than did other species, experienced boredom more similarly to humans than did other

species; and students showed more concern about horses being kept in industry-typical scenarios than they did for other species. When presented with hypothetical (but industry-typical) scenarios for egg production units, dairy operations, pig facilities and horse training facilities, more than 50% of all sampled groups stated they would either "not be very comfortable buying/using product from said facility" or "would not buy/use product from said facility. These data lend support to the concept that, even amongst a population that should be knowledgeable about animal agriculture, awareness of modern animal agriculture practices is low, and does not necessarily represent that concern is absent.

Henry, B. C. (2009). Can attitudes about animal neglect be differentiated from attitudes about animal abuse? *Society & Animals*, 17(1), 21-37.

The past decade has seen an increase in interest relating to the correlates and determinants of attitudes about nonhuman animals, especially attitudes about the use or abuse of animals. However, little research has explicitly addressed individual differences in attitudes about the neglect of animals. The current study employs a factor-analytic approach to explore (a) whether attitudes about animal neglect can be reliably differentiated from attitudes about animal abuse and (b) whether the relationship between attitudes about animal neglect and animal abuse differs as a function of gender. Results indicated that attitudes about abuse and neglect can be reliably differentiated among both men and women. However, the structure of these attitudes appears to differ substantially by sex. This paper discusses theoretical and practical implications of these results.

Herzog, H. A., & Dorr, L. B. (2000). Electronically available surveys of attitudes toward animals. *Society & Animals*, 8(2), 183-190.

Much of the research on attitudes toward non-human species has been conducted with non-representative samples. Largely ignored in the literature on human/animal interactions are surveys conducted by commercial polling organizations using large probability samples of Americans. Many of these surveys contain information relevant to attitudes about animals and animal welfare issues. This information is available to researchers electronically at little or no cost through organizations such as the Roper Center for Public Opinion Research and the National Opinion Research Center.

Kendall, H.A., Lobao, L.M., & Sharp, J.S. (2006). Public concern with animal well-being: Place, social structural location, and individual experience. *Rural Sociology*, 71(3), 399-428.

While sociologists and the public at large are increasingly interested in the life conditions of animals, conceptual and empirical development of the topic is limited. This paper seeks to further develop the sociological research on attitudes toward animal well-being. We build on insights from contemporary stratification theory to explain the nature of animal attitudes and their determinants. We also extend past work by examining a broader range of factors related to attitudes about animal wellbeing, focusing on place, other social structural factors, and individuals' unique animal-related experiences. Data are from a survey of over 4,000 Ohio residents conducted in 2002. We find that childhood experience has the greatest place-based effect on attitudes. Other findings highlight the importance of social structural factors, suggesting support for the "underdog hypothesis." Women, people experiencing economic hardship, those with less education, younger and middle aged people, and blacks tend to be more concerned with animal well-being. Individualized, experiential variables are also important. Our results reflect the complexity of attitudes about animals and point to the need for greater sociological attention to factors left largely unexplored in previous studies, including childhood place-based factors, economic hardship, and individuals' unique animal-related experiences.

Knight, S., Nunkoosing, K., Vrij, A., & Cherryman, J. (2003). Using Grounded Theory to examine people's attitudes toward how animals are used. *Society & Animals*, 11(4), 307-327.

This study uses qualitative methodology to examine why people have different attitudes toward different types of nonhuman animal use. Seventeen participants took part in a semi-structured interview. The study used Grounded Theory to analyze the interviews and developed a model that consists of 4 major themes: (a) "attitudes toward animals," (b) "knowledge of animal use procedures," (c) "perceptions of choice," and (d) "cost-benefit analysis." The findings illustrate that cognitive processing, characteristics of the species of animal being used, and the type of animal use can all influence attitudes toward animal use. Because previous research has focused on participant variables such as age and gender to explain variance in attitudes toward animal use (Furnham & Pinder, 1990; Kellert & Berry, 1981) and measured attitudes toward animal use in general (rather than distinguishing between different types of use) (Armstrong & Hutchins, 1996), these findings can add to knowledge of people's views on animal use. This paper discusses how such views may be justified and maintained.

Knight, S., Vrij, A., Cherryman, J., & Nunkoosing, K. (2004). Attitudes towards animal use and belief in animal mind. *Anthrozoös: A Multidisciplinary Journal of the Interactions of People & Animals*, 17(1), 43-62.

Animals are used by humans in many ways, yet science has paid little attention to the study of human–animal relationships (Melson 2002). In the present study, participants ($n = 96$) completed a questionnaire on attitudes towards animal use, and individual differences were examined to determine which characteristics might underlie these attitudes ("belief in animal mind," age, gender, experience of animals, vegetarianism, political stance, and living area). It emerged that participants held different views for different types of animal use, and that belief in animal mind (BAM) was a powerful and consistent predictor of these attitudes, with BAM together with gender and vegetarianism predicting up to 37% of the variance in attitudes towards animal use. Thus, future research should acknowledge the importance of BAM as a major underlying factor of attitudes towards animal use, and should also distinguish between different types of animal use when measuring attitudes. We propose that the large effect of BAM might be due to increasing interest in animal mind over the past decade.

Knight, S., & Barnett, L. (2008). Justifying attitudes toward animal use: A qualitative study of people's views and beliefs. *Anthrozoös: A Multidisciplinary Journal of the Interactions of People & Animals*, 21(1), 31-42.

"Animal use" is a contentious topic that refers to practices involving the utilization of non-human animals by human beings. These practices often evoke strong and emotional reactions from opposing parties, and individuals can hold incongruent views concerning different ways in which animals are used. Yet previous research in this area has tended to portray attitudes toward animal use as uni-dimensional (rather than distinguishing between different types of use), and the field has been dominated by quantitative approaches that focus on participant characteristics such as gender, age, and so on, in order to explain variance in people's views on this topic. The present study assumed that attitudes are not uni-dimensional and applied Grounded Theory Methodology in order to determine psychological factors that underlie people's views concerning animal use issues. Eight participant-led interviews explored the factors that people consider when rationalizing their attitudes toward the use of animals, and interview transcripts were analyzed with an aim to understanding why attitudes vary depending upon the type of animal use in question. Three key themes were identified, labelled as "type of animal used," "purpose of animal use," and "knowledge of animal use." These represent beliefs concerning animals and animal use, and help explain why people can support some animal use practices whilst opposing others. We conclude that taking a psychological approach in order to further examine the beliefs that underlie attitudes provides a way forward for future research.

Knight, S., & Herzog, H. (2009). All creatures great and small: New perspectives on psychology and human–animal interactions. *Journal of Social Issues*, 65(3), 451-461.

Relations between humans and nonhuman animals are morally significant, intense, enduring, and pervasive. Presented here are current perspectives on social and psychological aspects of human–animal interactions. The articles in this issue focus on three broad themes—attitudes toward the use of other species, the effects of relationships with companion animals on human health and well-being, and the ethical and policy implications of our interactions with other species. The article represents a mix of theory, qualitative and quantitative empirical approaches, review, and policy recommendations on a topic that has historically been neglected by social scientists.

Knight, S., Bard, K., Vrij, A., & Brandon, D. (2010). Human rights, animal wrongs? Exploring attitudes toward animal use and possibilities for change. *Society & Animals*, 18(3), 251-272.

Presented here are three research studies examining psychological characteristics underlying attitudes toward the use of nonhuman animals: beliefs and value systems; their comparative impact on opinions; and empathetic responses to humans and to animals. The first study demonstrated that the attitudes of laypeople are context dependent: different sets of beliefs underlie attitudes toward various types of animal use. Belief in the existence of alternatives (“perceptions of choice”) was especially important, accounting alone for 40% of the variance in attitudes. The second study compared the opinions, beliefs, value systems, and empathetic responses of scientists, animal welfarists, and laypeople. Results demonstrated that laypersons are most similar to the science community, not the animal welfare community. Scientists and laypeople differed on very few measures, whereas animal welfarists differed on most measures. The third study demonstrated a causal link between belief and attitude: manipulating “perceptions of choice” led to a significant change in support for animal use. These studies explain how individuals and groups can have dramatically different attitudes toward animal use and demonstrate how opinions can be changed.

Mazas, B., Fernández Manzanal, M., Zarza, F., & María, G. (2013). Development and validation of a scale to assess students' attitude towards animal welfare. *International Journal of Science Education*, 35(11), 1775-1799.

This work presents the development of a scale of attitudes of secondary-school and university students towards animal welfare. A questionnaire was drawn up following a Likert-type scale attitude assessment model. Four components or factors, which globally measure animal welfare, are proposed to define the object of the attitude. The components are animal abuse for pleasure or due to ignorance (C1), leisure with animals (C2), farm animals (C3) and animal abandonment (C4). The final version of the questionnaire contains 29 items that are evenly distributed among the four components indicated, guaranteeing that each component is one-dimensional. A sample of 329 students was used to validate the scale. These students were aged between 11 and 25, and were from secondary schools in Aragon and the University in Zaragoza (Aragon's main and largest city, located in NE Spain). The scale shows good internal reliability, with a Cronbach's alpha value of 0.74. The questionnaire was later given to 1,007 students of similar levels and ages to the sample used in the validation, the results of which are presented in this study. The most relevant results show significant differences in gender and level of education in some of the components of the scale, observing that women and university students rate animal welfare more highly.

Nicoll, K., Trifone, C., & Samuels, W. (2008). An in-class, humane education program can improve young students' attitudes toward animals. *Society & Animals*, 16(1), 45-60.

All 8 first-grade classes of an elementary school participated in a study of the efficacy of an in-class humane education program that incorporated regular visits from therapy animals. The study also investigated the relative efficacy of a popular, printed humane-education publication, although it was not possible to use this printed material in its optimal manner. The in-class humane-education program—but not

the printed material—significantly increased students' self-reported attitudes toward nonhuman animals as compared to those of students who did not participate in the program. However, neither the in-class program nor the printed material affected student scores on another, self-report measure of interactions with one's nonhuman animal companions. Therefore, the results suggest that such an in-class approach can change young students' attitudes toward animals for the better; not surprisingly, actual interactions with one's pets may be somewhat less tractable.

Phillips, C. C., & McCulloch, S. S. (2005). Student attitudes on animal sentience and use of animals in society. *Journal of Biological Education*, 40(1), 17-24.

Cultural differences in students' attitudes towards animals need to be better understood and respected in order to promote tolerance in multicultural biological education. A cross-cultural study was conducted to investigate the beliefs of 425 students of different nationalities on animal sentience and attitudes towards the uses of animals. European students and, to some extent, those from the USA were less likely to condone cruelty to animals on farms than students from Asian countries. Students from Europe had more concern for suffering during life than students from Asia, but there was no difference in the extent of reverence for animal life. Female students had both more concern for animal suffering during life, and a greater concern for the reverence of animal life than males, but there were no gender differences in sentience attributed to the different animal species. Teacher awareness of these cultural and gender differences should engender tolerance towards different students' attitudes to the use of animals in education. The order of sentience across nationalities that was attributed to different species was monkey > dog > newborn baby > fox > pig > chicken > rat > fish. Correlations between animal sentience and attitudes towards the uses of animals showed that the students opposing, or advocating constraints on, the use of animals in society attributed more sentience to those animals. This reinforces concern by some students, e.g. of veterinary medicine, about the use of dogs for terminal surgery practicals. It is concluded that teacher recognition of students' perceptions of animal suffering, their reverence for animal life and attribution of sentience to different species is important in ensuring that the use of animals in education is in harmony with the students' beliefs and concerns.

Prokop, P., & Kubiak, M. (2008). Bad wolf kills lovable rabbits: children's attitudes toward predator and prey. *Electronic Journal of Science Education*, 12(1).

This cross-age study explores children's attitude toward a model predator (wolf) and prey (rabbit). We administered a Likert-type attitude questionnaire with 30 items (15 per predator and 15 per prey) to a total of 462 children aged 10 – 15 year in Slovakia. The mean score from three dimensions derived by a factor analysis (scientific, ecologicistic and myths about parental care) was then subjected for pair wise comparisons. We found that younger children aged 10-11 year showed significantly more positive attitude toward a rabbit (prey) relative to wolf (predator). However, as children's age increased, the difference in means score disappear and positive attitudes toward predator and prey generally decrease. We hypothesize that these patterns could reflect either greater children's 'ecological thinking' or, more simply, decreasing interest toward animals in older children. The difference in attitudes toward predator and prey suggest that children's affective domain should not be neglected in future environmental programs, because attitudes influence pro-environmental behavior of future citizens.

Prokop, P., & Tunnicliffe, S. D. (2008). "Disgusting" animals: Primary school children's attitudes and myths of bats and spiders. *Eurasia Journal of Mathematics, Science & Technology Education*, 4(2), 87-97.

Knowledge of animals may influence children's beliefs and behaviour toward them, thus building positive attitudes toward animals is one of main goals of environmental education programmes. Although keeping animals contributes to the increase of children's positive attitudes toward wild animals, pet owners show similar negative attitudes toward less popular animals such as insects, bats or rats than non-pet owners. Moreover, some of these animals are emblazoned with various myths (hereafter alternative conceptions) which may have a negative impact on children's attitudes toward them. We used a novel approach with two

questionnaires with nearly identical items for identifying attitudes to bats and spiders in a sample of primary school participants (N = 196) aged 10 - 16 years. Score from each questionnaire was factor analysed and then compared with a pair-wise statistic. Children (especially girls) showed more negative attitudes toward spiders in comparison with bats. Both knowledge and alternative conceptions were distributed randomly irrespective of children's age or gender. We found a moderate, but significant correlation between alternative conceptions and attitudes, whereas more alternative conceptions resulted in more negative attitudes. Interestingly, the link between attitude and knowledge was found just for bats, but not for spiders perhaps due to greater fear from spiders. Implications of the study for the science education practise are discussed.

Prokop, P., & Tunnicliffe, S. (2010). Effects of having pets at home on children's attitudes toward popular and unpopular animals. *Anthrozoös: A Multidisciplinary Journal of the Interactions of People & Animals*, 23(1), 21-35.

Having pets at home provides various social, health, and educational benefits to children. The question of how keeping pets at home affects the attitudes of children toward wild animals still has not been answered, due to various methodological issues, such as ignorance of some attitude dimensions and/or questionnaires that include items focused on very different animals. We conducted three independent research surveys (using three independent samples) of Slovakian primary school children aged 10 to 15 years (n = 1297). These surveys focused on the effects of keeping pets on the attitudes of children towards, and knowledge of, three unpopular animals in Slovakia. These animals were pests (potato beetle) (Study 1), predators (wolf) (Study 2), and those that pose a threat of disease to humans (mouse) (Study 3). Each survey also included a popular animal (ladybird beetle, rabbit, and squirrel, respectively), which served as a "control"; these were compared by pair-wise statistics. Results consistently showed that children had better knowledge of, but less favorable attitudes towards, unpopular animals compared with popular ones. Having pets at home was associated with more positive attitudes to, and better knowledge of, both popular and unpopular animals. Girls were less favorably inclined than boys to animals that may pose a threat, danger, or disease to them. Implications for humane education are discussed, especially in terms of keeping pets, the link between knowledge and attitudes, and children's understanding of ecological adaptations.

Rule, A., & Zhbanova, K. (2012). Changing perceptions of unpopular animals through facts, poetry, crafts, and puppet plays. *Early Childhood Education Journal*, 40(4), 223-230.

Today's children are often separated from the natural world, developing fear and aversion to wild creatures. This humane education program used curriculum-blended science lessons that focused on eight generally disliked animals: bat, skunk, snake, mouse, spider, centipede, cockroach, and mosquito. First and second grade students participated in 6 weekly hour-long lessons that introduced appealing images of the creatures, facts, and poems that presented their lifestyles. Students practiced fine motor skills by making a craft version of each animal. Literacy skills were addressed by analyzing the poems and writing a script for a puppet play that told why humans don't like the animal and how these characteristics or behaviors help the animal survive in the environment. This pretest-intervention-posttest quasi-experimental study had 26 students (16 f, 10 m) in the experimental group and 16 (11 f, 5 m) in the control group. Students rated their liking for the eight targeted animals and four other animals not discussed in the intervention (dog, cat, goldfish, butterfly) on the pretest and posttest. Results showed significant differences for the experimental group for all animals considered together and for the targeted animals as a group. The control group did not exhibit these differences. The results indicate that lessons focusing on ecology and animal lifestyles help improve students' caring for animals.

Serpell, J. A. (2004). Factors influencing human attitudes to animals and their welfare. *Animal Welfare*, 13, S145-S152.

This paper reviews the literature on human attitudes to animals, and postulates the existence of two primary motivational determinants of attitudes labelled 'affect' and utility'. It also proposes that the relative strengths of these key attitude dimensions are affected by various modifying variables including the specific attributes

of the animal, the individual characteristics and experience of the person evaluating the animal, and a range of cultural factors. The role of science as a cultural modifier of human attitudes to animals is also discussed.

Signal, T. D., & Taylor, N. (2006). Attitudes to animals in the animal protection community compared to a normative community sample. *Society and Animals*, 14(3), 265-274.

Attitudes toward the treatment of nonhuman animals in the animal protection community remain largely under researched. In an attempt to begin to rectify this, this study conducted a survey of 407 members of the animal protection community using the Animal Attitude Scale (AAS). The survey also asked participants to indicate whether they identified more with (a) animal rights or animal welfare perspectives and (b) a direct or indirect action approach to securing animal protection. Results of the current study indicate that, regardless of philosophical or practical beliefs, those in the animal protection community were significantly more pro-animal welfare (as measured by the AAS) than members of the general community. This disparity was even greater between the current participants and those of a previous study who identified as being employed in the Primary Industry (PI) sector. This paper discusses implications of this as well as respondents' philosophical and practical views.

Signal, T. D., & Taylor, N. (2006). Attitudes to animals: demographics within a community sample. *Society & Animals*, 14(2), 147-157.

The results of various studies have suggested a range of demographic and personality variables that may affect attitudes toward the treatment of nonhuman species; however, the literature has reached little consensus. Various limited populations have used The Attitude to Animals Scale (AAS), developed initially by Herzog, Betchart, and Pittman (1991), as a quantitative measure of attitudes toward the treatment of nonhuman species. The current study administered the AAS to a large community sample within Australia, resulting in approximately 600 respondents. The study found demographic variables such as age, educational level, presence of children in the current dwelling, current, and past companion animal ownership to have no statistically significant effect on AAS scores. The study found both occupation and income to have an effect on AAS scores. This paper examines and discusses all of these variables and their effects (or lack thereof).

Smith-Harris, T. (2004). There's not enough room to swing a cat and there's no sense flogging a dead horse. *Revision*, 27(2), 12-15.

Examines language usage and human perceptions of other animals. Role of language usage in the social construction of a permissive societal attitude towards the treatment of animals; Importance of language in expressing perceptions and socially constructing normal animal use; Information on the violence embedded in language.

BOOKS

Aaltola, E. (2012). *Animal suffering: Philosophy and culture*. Hampshire, England: Palgrave Macmillan. ISBN: 9780230283916.

Animal Suffering: Philosophy and Culture explores how animal suffering is made meaningful within Western ramifications. It is often argued that today's culture is ambivalent in its attitudes toward non-human animals: on the one hand, many speak of the importance of 'animal welfare', and on the other, billions of animals each year are treated as little more than production units. The book gains its impetus from here, as it seeks to map out both the facts and norms related to animal suffering. It investigates themes such as animal welfare and suffering in practice, skepticism concerning the human ability to understand non-human suffering, cultural and philosophical roots of compassion, and contemporary approaches to animal ethics. At its center is the pivotal question: What is the moral significance of animal suffering? The key approach

brought forward is 'intersubjectivity', via which the suffering of other animals can be understood in a fresh light.

Bulliet, R. W. (2005). *Hunters, herders, and hamburgers: The past and future of human-animal relationships*. New York: Columbia University Press. ISBN: 9780231130769.

Richard W. Bulliet has long been a leading figure in the study of human-animal relations, and in his newest work, *Hunters, Herders, and Hamburgers*, he offers a sweeping and engaging perspective on this dynamic relationship from prehistory to the present. By considering the shifting roles of donkeys, camels, cows, and other domesticated animals in human society, as well as their place in the social imagination, Bulliet reveals the different ways various cultures have reinforced, symbolized, and rationalized their relations with animals. Bulliet identifies and explores four stages in the history of the human-animal relationship-separation, predomesticity, domesticity, and postdomesticity. He begins with the question of when and why humans began to consider themselves distinct from other species and continues with a fresh look at how a few species became domesticated. He demonstrates that during the domestic era many species fell from being admired and even worshipped to being little more than raw materials for various animal-product industries. Throughout the work, Bulliet discusses how social and technological developments and changing philosophical, religious, and aesthetic viewpoints have shaped attitudes toward animals. Our relationship to animals continues to evolve in the twenty-first century. Bulliet writes, "We are today living through a new watershed in human-animal relations, one that appears likely to affect our material, social, and imaginative lives as profoundly as did the original emergence of domestic species." The United States, Britain, and a few other countries are leading a move from domesticity, marked by nearly universal familiarity with domestic species, to an era of postdomesticity, in which dependence on animal products continues but most people have no contact with producing animals. Elective vegetarianism and the animal-liberation movement have combined with new attitudes toward animal science, pets, and the presentation of animals in popular culture to impart a distinctive moral, psychological, and spiritual tone to postdomestic life.

DeMello, M. (2012). *Animals and society: An introduction to human-animal studies*. New York: Columbia University Press. ISBN: 9780231152945.

Considering that much of human society is structured through its interaction with non-human animals, and since human society relies heavily on the exploitation of animals to serve human needs, human-animal studies has become a rapidly expanding field of research, featuring a number of distinct positions, perspectives, and theories that require nuanced explanation and contextualization. The first book to provide a full overview of human-animal studies, this volume focuses on the conceptual construction of animals in American culture and the way in which it reinforces and perpetuates hierarchical human relationships rooted in racism, sexism, and class privilege. Margo DeMello considers interactions between humans and animals within the family, the law, the religious and political system, and other major social institutions, and she unpacks the different identities humans fashion for themselves and for others through animals. Essays also cover speciesism and evolutionary continuities; the role and preservation of animals in the wild; the debate over zoos and the use of animals in sports; domestication; agricultural practices such as factory farming; vivisection; animal cruelty; animal activism; the representation of animals in literature and film; and animal ethics. Sidebars highlight contemporary controversies and issues, with recommendations for additional reading, educational films, and related websites. DeMello concludes with an analysis of major philosophical positions on human social policy and the future of human-animal relations.

Dolins, F. L. (1999). *Attitudes to animals: Views in animal welfare*. Cambridge, U.K: Cambridge University Press. ISBN: 9780521473422.

Attitudes to Animals provides a foundation that the reader can use to make ethical choices about animals. It will challenge readers to question their current views, attitudes, and perspectives on animals and the nature and development of the human-animal relationship. Human perspectives on the human-animal relationship reflect what we have learned, together with spoken and unspoken attitudes and assumptions, from our

families, societies, media, education, and employment. This thought-provoking book delves into what it means to be human, what it means to be animal, and the nature of the relationship between them. This is accomplished with philosophical and ethical discussions, scientific evidence, and dynamic theoretical approaches.

Gross, A.S., Vallely, A., Doniger, W., & Foer, J.S. (2012). *Animals and the human imagination: A companion to animal studies*. New York: Columbia University Press. ISBN: 9780231152976.

Human beings have long imagined their subjectivity, ethics, and ancestry with and through animals, yet not until the mid-twentieth century did contemporary thought reflect critically on animals' significance in human self-conception. Thinkers such as French philosopher Jacques Derrida, South African novelist J. M. Coetzee, and American theorist Donna Haraway have initiated rigorous inquiries into the question of the animal, now blossoming in a number of directions. It is no longer strange to say that if animals did not exist, we would have to invent them. This interdisciplinary and cross-cultural collection reflects the growth of animal studies as an independent field and the rise of "animality" as a critical lens through which to analyze society and culture, on a par with race and gender. Essays consider the role of animals in the human imagination and the imagination of the human; the worldviews of indigenous peoples; animal-human mythology in early modern China; and political uses of the animal in postcolonial India. They engage with the theoretical underpinnings of the animal protection movement, representations of animals in children's literature, depictions of animals in contemporary art, and the philosophical positioning of the animal from Aristotle to Derrida. The strength of this companion lies in its timeliness and contextual diversity, which makes it essential reading for students and researchers while further developing the parameters of the discipline.

Herzog, H. (2010). *Some we love, some we hate, some we eat: Why it's so hard to think straight about animals*. New York, NY: Harper. ISBN: 9780061730863.

Hal Herzog, a maverick scientist and leader in the field of anthrozoology offers a controversial, thought-provoking, and unprecedented exploration of the psychology behind the inconsistent and often paradoxical ways we think, feel, and behave towards animals. A cross between Michael Pollan's *The Omnivore's Dilemma* and Bill Bryson's *A Walk in the Woods*, *Some We Love, Some We Hate, Some We Eat*, in the words of Irene M. Pepperberg, bestselling author of *Alex & Me*, "deftly blends anecdote with scientific research to show how almost any moral or ethical position regarding our relationship with animals can lead to absurd consequences."

Manning, A., & Serpell, J. (2011). *Animals and human society: Changing perspectives*. London: Routledge. ISBN: 9780415513401.

Modern society is beginning to re-examine its whole relationship with animals and the natural world. Until recently issues such as animal welfare and environmental protection were considered the domain of small, idealistic minorities. Now, these issues attract vast numbers of articulate supporters who collectively exercise considerable political muscle. Animals, both wild and domestic, form the primary focus of concern in this often acrimonious debate. Yet why do animals evoke such strong and contradictory emotions in people - and do our western attitudes have anything in common with those of other societies and cultures? Bringing together a range of contributions from distinguished experts in the field, *Animals and Society* explores the importance of animals in society from social, historical and cross-cultural perspectives.

Marie, M. (2005). *Animal bioethics: Principles and teaching methods*. Wageningen: Wageningen Academic Publishers. ISBN: 9789076998589.

Nowadays there are widespread ethical concerns about animal production and our treatment of animals. This book is the first to specifically examine these issues from an educational perspective. With 19 chapters written by 31 authors experienced in this field and coming from 11 European countries, this book will be of

great value to veterinary, agronomy and science students and teachers. It will also be of use for everyone interested in developing moral reasoning and communication skills relative to ethics, whether animal-centred or in a broader sense. The first part of the book is devoted to in-depth analyses of historical, philosophical, religious and cultural perspectives as well as of the driving forces in action. This enables readers to develop a good understanding of the ethical principles related to human-animal relationships, and their dynamics. In the second part, teaching objectives, strategies and methods are analysed, resulting in a conceptual framework for education in this area. Concrete suggestions are given to be applied in teaching, training and communication. This provides a basis for curricula development, including appropriate principles, content and examples. A detailed syllabus is proposed in the case of animal welfare, including its rationale and extensive sources of information. The methods proposed, in their varying degrees of complexity involve active processes, mainly founded on case studies and problem-based learning. This will contribute to a necessary sharing of experience and the spreading of good practice.

Myers, G. (1998). *Children and animals: Social development and our connections to other species*. Boulder, Colo: Westview Press. ISBN: 9780813331713.

What role does an animal play in a child's developing sense of self? Do children and animals interact in ways no longer recognizable to adults? *Children and Animals* addresses these and many other intriguing questions by revealing the interconnected lives of the inhabitants of the preschool classroom—an environment abounding in childish verbal and nonverbal interactions with birds, turtles, toads, snakes, bugs, and other creatures. The child-animal interactions captured here suggest that the young child's developing sense of self and interactive skills are honed and enriched by the presence of nonhuman creatures. In touching and playing with animals, in talking to them or in silent presence, children reveal feelings and objectives they share with these important members of their daily lives. A privileged route by which these meanings are expressed and made conscious is pretend play, in which children translate the shapes and moods of the animal body into their own. As adults, we tend to marginalize the role of the animal body and animals' presence in our lives. In contrast, children see animals as co-conspirators, as creatures to contend with, as fascinatingly different yet similar "other beings." Children's sense of connection to animals provides insights into social development—and into our ideas about what it means to become human. Based on Gene Myers' study of two dozen children, and containing excerpts from children's dialogues with their nonhuman playroom cohabitants, this book is a delightful and rewarding opportunity to learn how children craft a sense of self that differentiates them from the animal world. It captures in a child's own words the importance of animals, birds, and reptiles to the child's growing social self. Parents, educators, and students of early childhood social development, as well as those intrigued by the intersection of human experience and the natural environment, will find this book to be a rewarding reading experience.

Preece, R. (2005). *Brute souls, happy beasts, and evolution: The historical status of animals*. Vancouver: UBC Press. ISBN: 9780774811569.

In this provocative inquiry into the status of animals in human society from the fifth century BC to the present, Rod Preece provides a wholly new perspective on the human-animal relationship. He skillfully demonstrates that, counter to prevailing intellectual opinion, ethical attitudes toward animals are neither restricted to the twentieth century nor the result of Darwin's theory of evolution. They have been part of Western thought and culture for centuries.

Ryder, R. D. (2000). *Animal revolution: Changing attitudes toward speciesism*. Oxford: New York. ISBN: 9781859733257.

When Richard Ryder coined the term 'speciesism' over two decades ago, the issue of animal rights was very much a minority concern that had associations with crankiness. Today, the animal rights movement is well-established across the globe and continues to gain momentum, with animal experimentation for medical research high on the agenda and very much in the news. This pioneering book — an historical survey of the relationship between humans and non-humans — paved the way for these developments. Revised, updated

to include the movement's recent history and available in paperback for the first time, and now introducing Ryder's concept of 'painism', *Animal Revolution* is essential reading for anyone who cares about animals or humanity.

Shevelow, K. (2008). *For the love of animals: The rise of the animal protection movement*. New York: Henry Holt and Co. ISBN: 9780805080902.

The engaging story of how an unlikely group of extraordinary people laid the foundation for the legal protection of animals. In eighteenth-century England—where cockfighting and bullbaiting drew large crowds, and the abuse of animals was routine—the idea of animal protection was dismissed as laughably radical. But as pets became more common, human attitudes toward animals evolved steadily. An unconventional duchess defended their intellect in her writings. A gentleman scientist believed that animals should be treated with compassion. And with the concentrated efforts of an eccentric Scots barrister and a flamboyant Irishman, the lives of beasts—and, correspondingly, men and women—began to change. Kathryn Shevelow, a respected eighteenth-century scholar, gives us the dramatic story of the bold reformers who braved attacks because they sympathized with the plight of creatures everywhere. More than just a history, this is an eye-opening exploration into how our feelings toward animals reveal our ideas about ourselves, God, mercy, and nature. Accessible and lively, *For the Love of Animals* is a captivating cultural narrative that takes us into the lives of animals—and into the minds of humans—during some of history's most fascinating times.

Smith, J. A., & Mitchell, R. W. (2013). *Experiencing animal minds: An anthology of animal-human encounters*. New York: Columbia University Press. ISBN: 9780231161503.

In these multidisciplinary essays, academic scholars and animal experts explore the nature of animal minds and the methods humans conventionally and unconventionally use to understand them. The collection features chapters by scholars working in psychology, sociology, history, philosophy, literary studies, and art, as well as chapters by and about people who live and work with animals, including the founder of a sanctuary for chickens, a fur trapper, a popular canine psychologist, a horse trainer, and an art photographer who captures everyday contact between humans and their animal companions. Divided into five sections, the collection first considers the ways that humans live with animals and the influence of cohabitation on their perceptions of animals' minds. It follows with an examination of anthropomorphism as both a guide and hindrance to mapping animal consciousness. Chapters next examine the effects of embodiment on animals' minds and the role of animal-human interembodiment on humans' understandings of animals' minds. Final sections identify historical representations of difference between human and animal consciousness and their relevance to pre-established cultural attitudes, as well as the ways that representations of animals' minds target particular audiences and sometimes produce problematic outcomes. The editors conclude with a discussion of the relationship between the book's chapters and two pressing themes: the connection between human beliefs about animals' minds and human ethical behavior, and the challenges and conditions for knowing the minds of animals. By inviting readers to compare and contrast multiple, uncommon points of view, this collection offers a unique encounter with the diverse perspectives and theories now shaping animal studies.

Soave, O. A. (1998). *The animal/human bond: A cultural survey*. San Francisco: Austin & Winfield Publishers. ISBN: 9781572921054.

Today, the interactions between man and animals are daily ones, sometimes subtle, other times complex and essential for the survival of both animals and man. The knowledge accumulated from human/animal interactions is interesting, stimulating and useful in everyday life. This story is of interest to biologists, behaviorists, agriculturalists, psychologists, sociologists, veterinarians, physicians and the general public.